

IN THE CLAIMS:

Please cancel Claims 9 and 21-31. Please amend the claims as follows.

1. (Currently Amended) A method for forming an oxide layer comprising:
 - (a) applying a coating material to a substrate;
 - (b) heating said first layer at about atmospheric pressure to a first process temperature for a first time duration to cause said first layer to outgas and form a first processed layer of SiO₂; and
 - (c) heating said first processed layer of SiO₂ at about atmospheric pressure to a second process temperature for a second time duration to form a cured layer of SiO₂.
2. (Previously Presented) The method of Claim 1, further comprising: applying a second layer of said coating material over said cured layer of SiO₂; heating said second layer of said coating material to said first process temperature for said first time duration to form a third processed layer; and heating said third processed layer to said second process temperature for said second time duration to form a fourth processed layer.
3. (Currently Amended) The method of Claim 1, wherein said thickness of said cured layer of SiO₂ is between about 1,000 Å and 1 µm.
4. (Original) The method of Claim 1, wherein said first time duration is between about five minutes to about ten minutes; and wherein said second time duration is between about five minutes to about ten minutes.
5. (Original) The method of Claim 1, wherein said first process temperature is between about 200° C and about 400° C.
6. (Original) The method of Claim 1, wherein said second process temperature is up to about 1300° C.

7. (Original) The method of Claim 1, wherein said coating material comprises spin-on glass (SOG).

8. (Currently Amended) The method of Claim 7, wherein said heating to said first process temperature causes said SOG to outgas to form said first processed layer of SiO₂; and

wherein said second process temperature causes said first processed layer of SiO₂ to cure.

9. (Canceled)

10. (Original) The method of Claim 1, wherein said substrate comprises a quartz substrate.

11. (Original) The method of Claim 1, further comprising repeating (a), (b), and (c) until an oxide layer of a pre-selected thickness is formed.

12. (Currently Amended) A method for forming an oxide layer on a substrate comprising:

(a) applying a first layer of a spin-on glass ("SOG") to a substrate;

(b) heating said first layer of SOG to a first process temperature at about atmospheric pressure for a first time duration to cause said first layer of SOG to outgas and form a first layer of SiO₂; and

(c) heating said outgassed layer of SOG and said first layer of SiO₂ to a second process temperature at about atmospheric pressure for a second time duration to cure said outgassed layer of SOG and said first layer of SiO₂.

13. (Currently Amended) The method of Claim 12, further comprising:
applying a second layer of SOG over said cured outgassed layer of SOG and said first layer of SiO₂;

heating said second layer of SOG to said first process temperature at about atmospheric pressure for said first time duration to cause said second layer of SOG to outgas; and

heating said second outgassed layer of SOG to said second process temperature at about atmospheric pressure for said second time duration to cure said second outgassed layer of SOG.

14. (Currently Amended) The method of Claim 12, wherin said thickness of said first layer of SiO₂ is between about 1,000 Å and 1 µm.

15. (Original) The method of Claim 12, wherein said first time duration is between about five minutes to about ten minutes; and

wherein said second time duration is between about five minutes to about ten minutes.

16. (Original) The method of Claim 12, wherein said first process temperature is between about 200° C and about 400° C.

17. (Original) The method of Claim 12, wherein said second process temperature is up to about 1300° C.

18. (Original) The method of Claim 12, wherein said substrate comprises a quartz substrate.

19. (Original) The method of Claim 12, wherein said applying a first layer of SOG to a substrate comprises dipping said substrate in a bath of said SOG.

20. (Original) The method of Claim 12, further comprising repeating (a), (b), and (c) until an SiO₂ layer of a pre-selected thickness is formed.

21.-31. (Canceled)